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Influence of Pressure from Compression Textile Bands: Their Using in the Treatment of Venous Human Leg Ulcers

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Abstract : The aim of study was to evaluate pressure distribution characteristics of the elastic textile bandages using two instrumental techniques: a prototype Instrument and a load Transference. The prototype instrument which simulates shape of real leg has pressure sensors which measure bandage pressure. Using this instrument, the results show that elastic textile bandages presents different pressure distribution characteristics and none produces a uniform distribution around lower limb. The load transference test procedure is used to determine whether a relationship exists between elastic textile bandage structure and pressure distribution characteristics. The test procedure assesses degree of load, directly transferred through a textile when loads series are applied to bandaging surface. A range of weave fabrics was produced using needle weaving machine and a sewing technique. A textile bandage was developed with optimal characteristics far superior pressure distribution than other bandages. From results, we find that theoretical pressure is not consistent exactly with practical pressure. It is important in this study to make a practical application for specialized nurses in order to verify the results and draw useful conclusions for predicting the use of this type of elastic band.

Keywords : textile, cotton, pressure, venous ulcers, elastic
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